



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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June 24, 1994

Mr. William J. Almas
Manager of Environmental Affairs
Energy Fuels Nuclear, Incorporated
One Tabor Center Suite 2500
1200 Seventeenth Street
Denver, Colorado 80202

Dear Mr. Almas:

Re: Surety Estimate Updates, Umetco Minerals Company, Hecla Shaft, Redd Block IV, Pandora Mine, M/037/043, M/037/046, M/037/012, San Juan County, Utah

As requested by you in our meeting on June 21, 1994, please find enclosed the surety estimate updates for the Hecla Shaft, Redd Block IV and Pandora Mine projects. The new estimates project the surety amount five years into the future, i.e. in terms of 1999 dollars. The original reclamation estimates were escalated to 1994 dollars using the actual inflation rates. These 1994 base amounts were then projected into 1999 dollars using an average inflation rate of the past three years.

If you have any question please feel free to call me, Wayne Hedberg or Tony Gallegos of the Minerals staff.

Sincerely,

Travis W. Jones
Reclamation Hydrologist

jb
Enclosures
Enfsurty.upd



SURETY ESTIMATE UPDATE
Umetco Minerals Company
Pandora Mine
M/037/012

Prepared by Utah Division of Oil, Gas & Mining
Last Update June 23, 1994

DESCRIPTION:

- Original Reclamation Estimate calculated in 1989-\$
- Original Reclamation Estimate = \$59,480
- Escalation factors through 1993 are actual Means Historical Cost Indices
- Escalation factors for years 1994 and beyond are predicted
- Total disturbed area = 15.0 ACRES

CALCULATIONS	YR	ESCAL FACTOR	BOND AMOUNT
$F = P(1 + i)^{**n}$	1989	1.77%	\$59,480
F = Future Sum	1990	0.77%	\$59,938
P = Present Sum	1991	1.27%	\$60,699
i = Escalation Factor	1992	2.21%	\$62,041
n = number of periods	1993	2.54%	\$63,616
	1994	2.01%	\$64,895
Three Yr Average = 2.01	1995	2.01%	\$66,200
Used to Project 5 Yrs	1996	2.01%	\$67,530
Into the Future	1997	2.01%	\$68,888
From the Year 1994	1998	2.01%	\$70,272
	1999	2.01%	\$71,685

Updated Surety Amount Rounded (1999 \$) \$71,700

Average Cost/Acre = \$4,780

SURETY ESTIMATE UPDATE

Umetco Minerals Corporation
 Pandora Mine, M/037/012, San Juan County, Utah

Prepared by Utah Division of Oil, Gas & Mining
 Last Update October 19, 1993

Comments:

- Original estimate made in 1989, for \$59,480
- Original estimate escalated to 1993 dollars, using 2.5% escalation factor, \$65,400
- Escalation factors through 1992 are actual Means Historical Cost Indices
- Escalation factors for years 1993 and beyond are predicted
- Total disturbed area = 15 ACRES

CALCULATIONS	YR	ESCAL FACTOR	BOND AMOUNT
$F = P(1 + i)^n$	1987	0.0195	\$0
	1988	0.0181	\$0
F = Future Sum	1989	0.0177	\$59,480
P = Present Sum	1990	0.0077	\$59,938
i = Escalation Factor	1991	0.0127	\$60,699
n = number of periods	1992	0.0221	\$62,041
	1993	0.0142	\$62,922
Three Yr Average = 1.42%	1994	0.0142	\$63,815
Used to Project 5 Yrs	1995	0.0142	\$64,721
Into the Future	1996	0.0142	\$65,640
From the Year 1993	1997	0.0142	\$66,572
	1998	0.0142	\$67,518
Updated Surety Amount Rounded (1998 \$)			\$67,500

** Average cost per acre = 4,500 (\$/ACRE)

Reclamation Estimate for Umetco Minerals Corporation
Pandora Mine San Juan County M/037/012

Prepared By Utah State Division of Oil, Gas and Mining
 June 2, 1989 Revised 10-02-89

Description	Quantity	Unit	\$/Unit	Cost (\$)
On-Site Facilities Reclamation				
Demolish and Dispose of Buildings (a)				
Dispose of Water Tank (a)				
Construct Bulkhead Inside Portal		Lump Sum		1,200
Backfill Portal to Bulkhead		Lump Sum		600
Remove Powerlines and Poles	2,000	Linear Feet	2.00	4,000
Remove Transformers		Lump Sum		500
Remove Trash	3.6	Acres	100	360
Rip Roads	0.7	Acres	175	120
Grade for Uniformity	3.6	Acres	430	1,550
Revegetate	3.6	Acres	447	1,610
Subtotal				9,940
Off-Site Facilities Reclamation				
Backfill Vent Holes with Rip-Rap	8	Each	300	2,400
Install 5' Concrete Cap in Vent Holes	40	Cubic Yards	120	4,800
Remove Powerlines and Poles	4,000	Linear Feet	2.00	8,000
Remove Trash	2.4	Acres	20	50
Rip Roads	1.0	Acres	175	180
Grade for Uniformity	1.0	Acres	430	430
Revegetate	1.0	Acres	447	450
Subtotal				16,310
Waste Dump Reclamation				
Remove Trash	5.3	Acres	100	530
Grade to a 30 degree Slope	14,300	Cubic Yards	0.80	11,440
Revegetate	5.3	Acres	447	2,370
Subtotal				14,340
Ore Pad Reclamation				
Remove Trash	1.8	Acres	100	180
Grade to a 30 degree Slope	5,000	Cubic Yards	0.80	4,000
Revegetate	1.8	Acres	447	800
Subtotal				4,980
Forest Service Surety Estimate (see attached) (b)				8,500
Totals				54,070
Add Contingency (10%)				5,410
TOTAL RECLAMATION COST (1989 Dollars)				59,480
TOTAL RECLAMATION COST (1994 Dollars) @ 1.93% Annual Inflation				65,400

Reclamation Estimate for Umetco Minerals Corporation
Pandora Mine San Juan County M/037/012

Prepared By Utah State Division of Oil, Gas and Mining
 June 2, 1989 Revised 10-02-89

Cost Parameters Used

D-8 Dozer (O&O)	160	\$/hour
988B Wheel Loader (O&O)	165	\$/hour
Labor Only	24	\$/hour
Trash Removal	100	\$/acre
Farm Tractor (O&O)	67	\$/hour
Speed	4	mph
Width of Pass	6	feet

Revegetation Cost per Acre	Quantity	Unit	\$/Unit	Total Cost (\$)
Bare Costs				
Fertilizer (18-46-0)	100	Pounds	0.25	25
Seed Mix	20	Pounds	9	180
Native Hay Mulch	2	Tons	50	100
Subtotal				305
Application Costs				
Native Hay Mulch (spread by hand)	3.0	Hours	24	72
Native Hay Mulch (disc into ground)	0.3	Hours	67	23
Fertilizer (broadcast by hand)	0.5	Hours	24	12
Seed Mix (drilled)	0.5	Hours	24	12
Scarify (tractor with chain)	0.3	Hours	67	23
Subtotal				142
Total Revegetation Cost per Acre				447

- Notes:
- (a) The buildings and water tank have salvage values that will exceed removal cost.
 - (b) The Forest Service Surety Estimate is for 1 of 9 vent holes, and associated disturbance. Only 8 vent holes have been calculated into the DOGM figures.

